



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,391	01/27/2006	Meinrad Holderied	19527	3602

272 7590 12/14/2007
SCULLY, SCOTT, MURPHY & PRESSER, P.C.
400 GARDEN CITY PLAZA
SUITE 300
GARDEN CITY, NY 11530

EXAMINER

THOMAS, ALEXANDER S

ART UNIT	PAPER NUMBER
----------	--------------

1794

MAIL DATE	DELIVERY MODE
-----------	---------------

12/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,391	Applicant(s) HOLDERIED ET AL.	
	Examiner Alexander Thomas	Art Unit 1794	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/1/06 and 12/20/06</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Nels ('579). The reference discloses the invention substantially as claimed, namely a synchronizer ring comprising a support body made of metal and a conical friction surface on the body, wherein the friction surface comprises carbon fibers and resin and is adhesively attached to the support body under pressure; see Figures 1 and 2, column 7, lines 58-59 and column 10, lines 18-47.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over either applicants' acknowledged state of the art or Nels ('579) each in view of Winckler 4,700,823. The primary references each disclose a synchronizer ring comprising a support body made of metal and a conical friction surface on the body; see page 1, lines 9-23 of the instant

Art Unit: 1794

specification, and Figures 1 and 2 of Nels. The secondary reference discloses a friction material comprising a carbon fabric densified with carbon material and adhesively bonded to a substrate, wherein the adhesive is a phenolic material that penetrates the friction material and is joined to the support body under pressure; see column 7, line 52 through column 8, line 12. It would have been obvious to one of ordinary skill in the art to use the friction material of the secondary reference in the product of the primary references to provide a synchronizer ring having improved operating characteristics. It would also have been obvious to one of ordinary skill in the art to adjust the thickness of the friction layer to any optimum amount depending on the end use of the product. Concerning the compressibility of the friction layer (claims 2 and 9), the layer of the prior art is considered to inherently possess the claimed property since it is made from the same materials as the instantly claimed article and has been compacted like the instantly claimed product. Concerning claim 4, the phrase "heat-treated so as to convert ..." is a process limitation that does not add any patentably distinguishing structural features to the claimed product. Regarding claim 6, the adhesive used to adhere the friction surface to the substrate meets this claim limitation since it penetrates the friction material.

5. Claims 2, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nels ('579). The reference discloses the invention substantially as claimed, namely a synchronizer ring comprising a support body made of metal and a conical friction surface on the body, wherein the friction surface comprises carbon fibers and resin that is adhesively attached to the body under pressure; see Figures 1 and 2, column 7, lines 58-59 and column 10, lines 18-47. It would also have been obvious to one of ordinary skill in the art to adjust the thickness of the

Art Unit: 1794

friction layer to any optimum amount depending on the end use of the product. The examiner takes official notice of the fact that it is well known to make synchronizer rings using metal substrates, such as brass, and therefore, the use of a metal material in the claimed product is not patentably distinguishing (claim 8).

6. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nels ('579) in view of Domergue et al ('475). The primary reference discloses the invention substantially as claimed, namely a synchronizer ring comprising a support body made of metal and a conical friction surface on the body, wherein the friction surface comprises carbon fibers and resin that is adhesively attached to the support body under pressure; see Figures 1 and 2, column 7, lines 58-59 and column 10, lines 18-47. However, it does not disclose the presence of a carbon material in the friction layer in addition to the carbon fabric. The secondary reference discloses that it is well-known to densify friction surfaces by the inclusion of a carbon material to improve wear properties. It would have been obvious to one of ordinary skill in the art to include carbon in the friction material of the primary reference as taught by the secondary reference in order to improve wear properties of the friction material. The phrase "heat-treated so as to convert ..." in claim 4 is a process limitation that does not add any patentably distinguishing structural features to the claimed product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Thomas whose telephone number is 571-272-1502.

The examiner can normally be reached on 6:30-4:00 M-THUR.

Art Unit: 1794

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander Thomas/
Primary Examiner
Art Unit 1794